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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/309,264 05/11/99 YODA

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004372 MM91/1011
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EXAMINER

DE JESUS, J

ART UNIT

PAPER NUMBER

2859

DATE MAILED:

10/11/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.

09/309,264

Applicant(s)

YODA ET AL.

Examiner

Lydia M. De Jesús

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 July 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 May 1999 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 7.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Continued Prosecution Application

1. The request filed on July 30, 2001 for a Continued Prosecution Application (CPA) under 37 CFR 1.53(d) based on parent Application No. 09/309,264 is acceptable and a CPA has been established. An action on the CPA follows.

Information Disclosure Statement

2. The foreign Patent documents listed in the information disclosure statement filed on October 25, 2000 have now been considered and an updated copy of the information disclosure statement is attached to the present communication.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 1 through 12 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

In this case, it appears that the Specification, as originally claimed, fails to clearly provide support for the limitations in claims 1, 5, and 12, as amended, regarding the auto pallet changer being of or pertaining to the machining tool and the claimed waiting position pertaining to or being of an auto pallet changer of a machining tool.

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Claims 2-4 and 6-11 are rejected due to their dependence upon claim 1 and claim 5, respectively.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claim 12 is rejected under 35 U.S.C. 102(b) as being anticipated by Yoshida. *→ cmm with probe - other alternative statement of machining tool with pallet changer set.*

Yoshida discloses (see Figure 14) a coordinate-measuring machine [MUNT] disposed in *vicinity of* (the vicinity) of a machining tool [MT1], said coordinate-measuring machine inherently including a probe. *coordinate mm with probe everything else is manner of use*

With respect to the limitations “for getting a probe thereof close to a work in a waiting position of an auto pallet changer of said machining tool, having been machined by said machining tool, placed on said waiting position, to thereby measure the forms and dimensions of said work”: said limitations are insufficient to patentably distinguish the Prior Art from the claimed apparatus because they fail to set forth structural limitations of said coordinate-measuring machine and further since they are directed to the manner in which the coordinate-measuring machine is to be used and it has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. Ex parte Masham, 2 USPQ2d 1647 (1987).

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7. Claims 1, 4 and 12 are rejected under 35 U.S.C. 102(b) as being anticipated by Yoshida.

Yoshida discloses a work form-measuring method comprising the steps of: placing a work on a waiting position of an auto pallet changer [APC1] of a machining tool [MT1], said (waiting position considered to correspond to any location on the pallet magazine or at the measuring unit [MUNT] after the work has been machined by the machining tool [MT1]); and bringing a probe/measuring head of a coordinate-measuring machine close to said work in a waiting position (the waiting position in this case being at the inlet of the measuring unit [MUNT]), and then measuring the forms of and dimensions of said work (Col. 24, lines 24-31), said coordinate measuring machine being arranged in the vicinity of said machining tool, as shown in Figure 14. Inherently, (said coordinate-measuring machine is capable of taking refuge to such a position as that said coordinate measuring machine does not prevent said work from moving.)

With respect to claim 12: Yoshida discloses (See Figure 14) a coordinate measuring machine [MUNT] disposed in the vicinity of a machining tool [MT1] for getting a probe/measuring head thereof close to a work in a waiting position (in this case at the inlet of the measuring tool), having been machined by said machining tool (Col. 24, lines 24-31), placed on said waiting position, to thereby measure the forms and dimensions of the work.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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9. Claims 2 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yoshida in view of Dailey.

Yoshida discloses a work form-measuring method as claimed, as stated above in paragraph 7, but fails to explicitly disclose the direction of motion of said tool of the machining tool and the direction of motion of the probe/measurement head of said coordinate-measuring machine.

Dailey teaches the use of horizontal machining centers [12, 14] with rotating worktables on a closed-loop machining center.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the work form-measuring method of Yoshida by selecting a probe of the coordinate-measuring machine and the tool of the machine tool both with a horizontal direction of motion, as taught by Dailey, in order to facilitate machining of various surfaces of the work by the same machine tool via rotation of the work on the worktable.

10. Claims 5 through 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yoshida in view of Dailey.

Yoshida discloses a work form measuring apparatus (See Figure 14) comprising an auto pallet changer [APC1] of a machining tool [MT1] for moving a work between a waiting position and a machining position t an inlet of a machining tool [MT1] (said waiting position considered to correspond to any location on the pallet magazine or at the measuring unit [MUNT] after the work has been machined by the machining tool [MT1]) and a coordinate measuring machine [MUNT] for bringing a probe/measuring head thereof close to said work in said waiting position of said auto pallet changer (the waiting position in this case being at the inlet of the measuring

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unit [MUNT], after the work has been machined by said machining tool, placed on said waiting position, to thereby measure the forms and dimensions of said work.

Official Notice is taken with respect to the limitations in claim 11 since it is very well known to provide a coordinate measuring machine with a rotating means i.e., pivoting worktable, for rotating the work which is placed on a measuring position.

The coordinate measuring machine inherently comprises refuge means for causing said coordinate measuring machine to take refuge to such a position as that said coordinate-measuring machine does not prevent said work from moving. The particular direction of motion in which the coordinate measuring machine takes refuge is considered to be a choice of design or engineering skill.

The apparatus disclosed by Yoshida includes a system controller that coordinates the operation of both the machine tool and the coordinate-measuring machine, and also coordinates the transport of the work between the machining tool and the coordinate-measuring machine, hence: said machining tool and said coordinate-measuring machine mutually exchange a measurement enabling signal and a measurement completion signal, both of which are related to the movement of said work by said auto pallet changers and the pallet magazine; and said coordinate-measuring machine leaves a refuge position after having received a signal of informing a change movement completion, from said machining tool, and said changer starts moving said work after having received a signal of informing a coordinate-measuring machine refuge completion.

The pallet magazine of the apparatus disclosed by Yoshida allows to set a waiting time for a work to be transported between machining steps, in instances where it is necessary to cool

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the work after machining by natural heat dissipation, and hence Yoshida fails to disclose one ^{a singular} auto pallet changer moving said work between a machining position at an inlet of a machining tool and waiting position in which the forms and measures of said work are measured by a coordinate measuring machine.

Dailey shows a closed loop machining system in which a work on a pallet is displaced directly from each machining tool to the inlet of the next machining tool by a corresponding transfer unit/pallet changer. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the apparatus of Yoshida, such that one pallet changer moves the work directly from the machining tool to the coordinate-measuring machine, as suggested by Dailey in order to have a compact closed loop machining and inspection apparatus.

Response to Arguments

11. Applicant's arguments filed May 28, 2001 have been fully considered but they are not persuasive.

In response to the argument presented by Applicant stating that Yoshida fails to disclose or suggest measuring the work at a waiting position of an APC of a machine tool directly after machining, as recited in the claims as amended: Applicant should note that for example claim 12 recites "measuring the work in a waiting position of an auto pallet changer of said machining tool, having been machined by said machining tool, placed on said waiting position" and it is considered that the work-form measuring apparatus disclosed by Yoshida includes a waiting position of the auto pallet changer of a machining tool, as discussed above, and hence this rejection is considered to be proper. Moreover, the claim language recites "having been

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machined by said machining tool” and hence the portion of the argument that refers to a measurement performed directly after machining is not related to claimed subject matter.

In response to arguments presented by Applicant regarding the combination of Yoshida and Dailey: Dailey has been cited in other to show that it is known in the art to use in a closed loop machining center or in a manufacturing system, a number of machine tools approaching the workpiece in the same direction, in this case horizontally, and further measuring units having a probe that approaches the work in a horizontal direction are of common use in the art, hence, it is considered that one of ordinary skill in the art would find it obvious to apply this teaching to a manufacturing system as that disclosed by Yoshida which includes a measuring unit in combination with machining tools. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Conclusion

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Heisel et al. disclose a device for numerically controlled manufacturing that includes manipulating and measuring apparatuses. JP01016351A discloses a related apparatus.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lydia M. De Jesús whose telephone number is (703) 306-5982. The examiner can normally be reached on Mondays-Fridays (8:30-6:00), alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Diego F.F. Gutierrez can be reached on (703) 308-3875. The fax phone numbers for

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the organization where this application or proceeding is assigned are (703) 308-7722 for regular communications and (703) 305-3431 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1782.



Diego F.F. Gutierrez
Supervisory Patent Examiner
Technology Center 2800

LDJ
October 9, 2001